



HEPA Vacuum Cleaner Program

May 2007

EPA's objectives for removal actions in Libby and Troy are to:

1. Minimize the ongoing release of Libby Amphibole (LA) asbestos by removing or containing sources.
2. Reduce health risks associated with excess exposure to LA.

EPA is accomplishing these removal objectives through a robust response including:

- sampling and characterization
- attic and interior home cleaning
- outdoor soil removal
- distribution of vacuum cleaners with High Efficiency Particulate Air (HEPA) filters
- developing an Operations and Maintenance program in Libby



HEPA Vacuums as Part of the Overall Cleanup Approach

EPA intends to clean each property by designing and implementing a cleanup plan that will address most potential issues. However, EPA recognizes that no cleanup program can eliminate *all* exposures, levels of risk, or possibilities for recontamination. Situations presenting lower levels of risk may be dealt with later through additional investigations, potential additional cleanup, and/or by taking precautions during the remediation process.

Even after EPA's cleanup of hot spots is completed and the major LA sources are removed or contained, some fibers will remain that could lead to a low-level or short-duration exposure to LA.

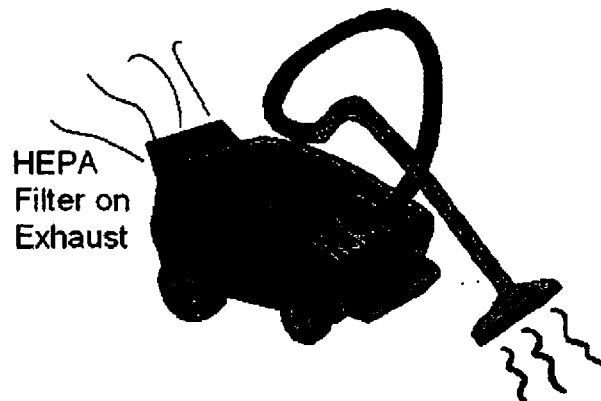
Currently, these remaining risks cannot be accurately quantified. However, the HEPA vacuums further reduce these lowered risks and help to ensure the continued protectiveness of the EPA cleanup program.

The HEPA vacuums are another step in an already rigorous cleanup program, not a substitute for cleanup!

Examples of potential low-level or short-duration exposure to Libby Amphibole asbestos include these sources:

- vermiculite insulation in walls (a potential problem if the wall is opened up – such as when replacing a light fixture or electrical outlet)
- low levels of LA remaining in dust or in textiles (couches or curtains)
- LA present below carpets (a potential problem if carpet is removed)
- LA sources not discovered at depth in soils (a potential problem if dug up)
- personal possessions that were not cleaned
- Libby asbestos tracked in from soils or other materials outside of the property

A vacuum with a HEPA filter is used exactly the same way as a standard vacuum. Its construction is also almost identical to a standard vacuum. The only real difference between a HEPA vacuum and a standard vacuum is that a **HEPA vacuum filters the exhaust air using a HEPA filter.**



A HEPA filter is made up of hundreds of square feet of filter paper folded into a couple of square feet of space. These filters can remove 99.97% of all particles that are 0.3 microns in size or larger. The majority of Libby Amphibole asbestos fibers are between 0.5 and 5 microns in size. For comparison, one inch contains about 25,000 microns.

Unlike some HEPA vacuum cleaners, the HEPA vacuum cleaners provided by EPA and DEQ will have a fully-sealed containment area and filtration system. This ensures that *all* air, debris, and lung-damaging particles pass through the vacuum bag and HEPA filter and do not exit out other areas of the vacuum cleaner.

This means HEPA vacuums, if used correctly, will successfully capture almost all of the fibers of current concern in your home.

In addition, the HEPA filter is located beyond the motor to ensure all air the motor draws in passes through it.

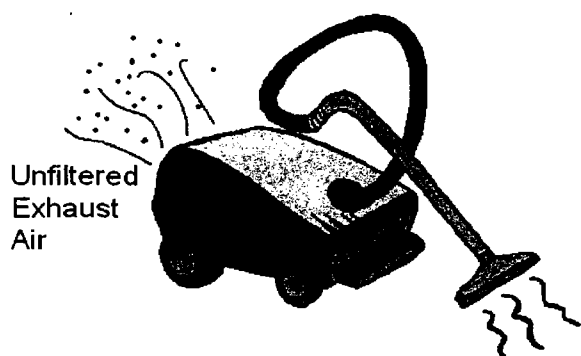
The HEPA vacuum cleaners provided by EPA and DEQ will come complete with a floor attachment and hand tools.

Operation and Maintenance

The manufacturer's instructions will provide direction on how and when to change the bag and filter. **It is important to follow these instructions carefully so that the integrity and performance of the filter is maintained!**

The vacuum will be covered under the manufacturer's warranty. Instructions on how to register the vacuum for the warranty will be provided with the vacuum. All maintenance will be the responsibility of the homeowner.

Standard vacuums *don't* filter out asbestos! The function of any vacuum is to remove dust and dirt from floors, furniture, or drapes. Vacuums draw in the dust and dirt and store it in either a bag or canister. The air that is taken in with the dust and dirt is pulled through the vacuum system and exhausted through the motor. Very small dust and dirt particles, such as asbestos fibers, can be drawn through the bag and canister and returned into the air.



It is important to note that the HEPA vacuums EPA is providing are NOT intended for bulk removal of vermiculite insulation from attics or walls!

HEPA vacuums *do* filter out most asbestos! Use of HEPA vacuums in the living space will provide property owners with a cost-effective, easy-to-use tool with the following benefits:

- Short-term, periodic use will reduce leftover contamination in dust that escaped EPA's cleanup. It will also reduce fibers present at levels that did not trigger an EPA cleanup.
- Long-term, periodic use will help prevent recontamination from outside sources or from areas EPA did not clean up. While EPA believes such occurrences will be minimal, the HEPA vacuum provides a practical way to address the issue with little effort, giving property owners additional assurance over time.
- Long-term, periodic use can address ongoing releases of non-Libby asbestos (generally chrysotile asbestos) from sources that EPA is not removing, such as pipe wrap, floor tiles, and ceiling tiles.
- One-time use can address situations where a small amount (less than a small handful) of Libby Amphibole asbestos is inadvertently introduced into the living space, such as when a wall is slightly opened up or when carpet is removed.

Questions?

If you have any questions or concerns regarding the HEPA Vacuum Program, please call the EPA Information Center at 406-293-6194 or the DEQ Troy Information Center at 406-295-9238

Who Will Receive a HEPA Vacuum?

EPA and DEQ are providing a HEPA vacuum to every residence or commercial property in Libby and Troy where there is a potential for indoor dust contamination. This includes properties where vermiculite was found anywhere inside or outside in yards, gardens, flowerbeds, or driveways. Residents do not have to initiate the process. The first people to receive a HEPA vacuum will be those whose properties EPA has cleaned up.

For properties that have not yet been cleaned up or that don't meet the criteria for EPA cleanup, EPA and DEQ will provide a HEPA vacuum only after dust samples are collected. This ensures that use of the vacuum does not affect the sample results and the resulting decision as to whether or not a cleanup should be done.

Even if a property does not meet the criteria for cleanup, there still may be low levels of Libby Amphibole Asbestos (LA) in the dust. Using a HEPA vacuum will minimize this problem.

The Superfund risk assessment will give EPA more information on the health risks of Libby Amphibole Asbestos (LA) in dust. As more information on LA becomes available, the details of the HEPA vacuum cleaner program might be adjusted in the future. EPA conducts post-cleanup sampling to evaluate how cleanup and HEPA vacuums performed.



The HEPA vacuum cleaner program is voluntary and property owners also have the option of purchasing their own HEPA vacuum now or in the future (including property owners that don't meet the general criteria for eligibility).

If you would like to buy your own vacuum cleaner, make sure the model you buy has a disposable 0.3 micron HEPA filter with disposable bags. EPA is now offering a choice between canister and upright models.